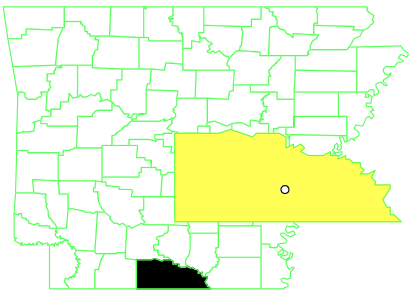
POPILE, INC.

EPA REGION 6
EPA ID# ARD008052508
Site ID: 0603790
CONGRESSIONAL DISTRICT 4

El Dorado, Union County, Arkansas

Updated: April 22, 2005



Site Description

Location:
- Union County, about 3/4 mile south of El Dorado City Limits.

Population:
- 25,000

Setting:
- No drinking water wells within ½ mile of the site.
- Residential property on two sides; industrial/commercial properties on the other two sides.
- Starting in 1976, three surface impoundments were used as part of waste water treatment process.

Hydrology:
- Site drainage enters Bayou deLoutre.
- Shallow groundwater within the county used primarily for livestock watering.
- Wells in the El Dorado Aquifer located more than 3 miles from the site provide drinking water to more than 26,000 residents.

Current Site Strategy

- The objective of this site cleanup is to protect human health and the environment by controlling the migration of shallow groundwater contaminants so as to reduce and/or eliminate the potential of contaminating deeper aquifers, and if possible restore the shallow groundwater to a potential future beneficial use. The plan was to bioremediate contaminated soils so that they do not leach contaminants into the groundwater and to bioremediate groundwater in place. USEPA and the U.S. Army Corps of Engineers (USACE) conducted studies to determine the how successful soil and groundwater bioremediation can be. EPA has implemented the remedial action through USACE Total Environmental Restoration Contract (TERC) delivery orders.

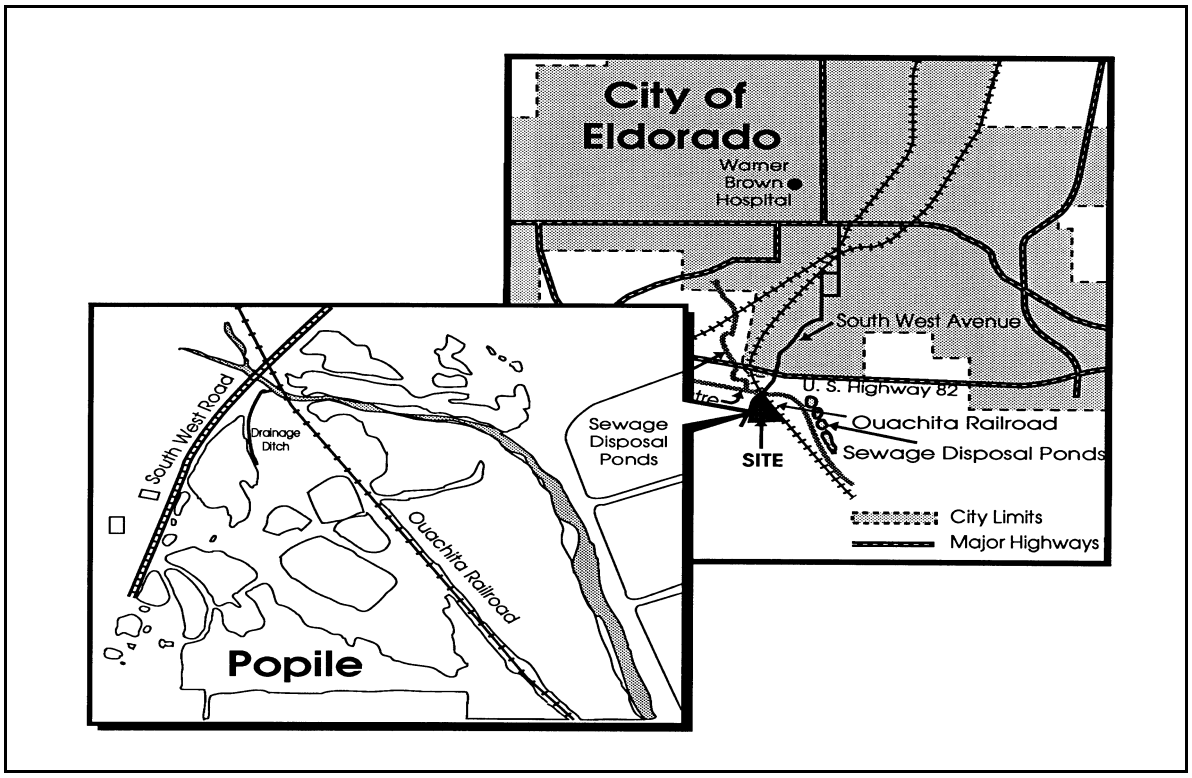
Wastes and Volumes

- The principal pollutants at the Popile Superfund site include creosote and pentachlorophenol (PCP) associated with wood treatment operations.

Site Assessment and Ranking

NPL LISTING HISTORY
Proposed Date: 02/04/92
Final Date: 10/14/92
NPL Update: No. 12

Site Map and Diagram



The Remediation Process

- **Site History:**
  - Popile, Inc., is a 40-acre site on the east side of Southfield Road 1/4 of a mile before its intersection with U.S. Highway 82.
  - The property is bordered by the Ouachita Railroad on the east, Southfield Road to the north and west and Bayou de Loutre, a perennial creek, on the north. A woodland area is south, up gradient to the site, and wetlands are 1 mile downstream, extending about 14 stream miles. The Bayou de Loutre, a commonly used fishing area, and a downstream boat ramp receive drainage from the site.

- In 1947, El Dorado Creosote Co., the parent company of Popile, Inc., began treating wood at the 40-acre property using pentachlorophenol (PCP) and creosote. El Dorado Pole & Piling Company purchased the property in 1956 and began using three surface impoundments as part of the waste water treatment process in 1976. The wood treatment operations ceased in July 1982.
- In September 1982, Popile bought approximately 7 ½ acres of the property including the surface impoundments and a large area known as the Salt Flat. In 1984, Popile closed the three impoundments.
- The EPA conducted an initial analysis in October 1989, which identified contaminants in the on-site soil.
- An EPA removal action started September 5, 1990, and was completed August 1, 1991. Removal activities included stabilizing contaminated soils and sludge, grading and shaping the site surface for erosion control, capping a temporary impoundment area, installing steel culverts in a drainage area, topsoil and seed entire site, as well as installing a security fence, and the posting of warning signs.
- Over 66,000 Cubic Yards of contaminated soil were placed in a holding cell on site.

- **Health Considerations:**

  - Direct contact with soils.
  - Ingestion of ground or surface water.

- **Other Environmental Risks:**

  - Sediments in Bayou deLoutre contain low level concentrations of various polyaromatic hydrocarbons (PAHs).

Record of Decision

Signed: February 20, 1993

- The following remedies will protect humans from unhealthy exposures to contaminated soil and groundwater.

  - Ground Water:
    - In situ treatment of contaminated ground water and extraction of free phase wood treating fluids.
    - Off site disposal of wood treating fluids

  - Soil Treatment:
    - Onsite biological land treatment of contaminated soils and sludge.

- There was significant state involvement choosing the remedies.
- Onsite incineration strongly considered but rejected by the state and local community.

Other Remedies Considered	Reason Not Chosen
1. "No Action"	Not Protective remedial objectives
2. Institutional Controls	Not Protective
3. Stabilization	Not Protective in Long Term
4. RCRA Cap	Not Protective in Long Term

Community Involvement

- Community Involvement Plan: Developed 06/92
- Open houses and workshops: 02/92, 07/92, 08/92, 09/92, 5/93, 9/97
- Original Proposed Plan Fact Sheet and Public Meeting: 06/92, 07/92.
- Original ROD Fact Sheet: 02/93.
- Milestone Fact Sheets: 06/92, 02/93, 5/93
- Citizens on site mailing list: 172
- Constituency Interest: Low to medium.
- Public Notice for Amended ROD July 2001
- Site Repository: Barton Public Library

Technical Assistance Grant

- Availability Notice: 06/92
- Letters of Intent Received: None
- Grant Award: N/A

Contacts, Fiscal and Cost Recovery Management

- **Contacts**
  - **Remedial Project Manager (EPA):** Shawn Ghose (214) 665-86782 Mail Code: 6SF-AP
  - **State Contact:** (ADEQ) Kin Siew,, (501) 682-0855
  - **Community Involvement (EPA):** Shawn Ghose (214) 665-86782 Mail Code: 6SF-AP
  - **Attorney (EPA):** James Bovey 214/665-2794, Mail Code 6 RC-S
  - **State Coordinator (EPA):** Karen Bond, 214/665-6682, Mail Code. 6SF-AP
  - **Prime Contractor:** USACE subcontractor Morrison-Knudsen

Present Status and Issues

- **Current**

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  - EPA had determined that soil microbial activity can remediate soils in the old process area but can not remediate the fly ash stabilized soils in the soil cell.
  - USACE prepared a plan for identifying the specific parameters required for designing the full scale old process area soils remediation. The New Orleans USACE District was the construction agent for the remedial action. As a part of the process to implement the remedies of the Record of Decision(ROD), the Corps of Engineers conducted a subsurface investigation followed by ground water flow and contaminant transport modeling. In addition, USACE Waterways Experiment Station (WES) conducted microscale and mesoscale treatability studies

of treating PCP and PAH contaminated soils by landfarming. Results of bioremediation studies, between 1997 and late 1999, of contaminated soil from the impoundments, indicated that bioremediation may not work to reduce PCP and PAHs in a reasonable time. Also, extensive monitoring wells, boreholes and piezometer readings in mid 1998 indicated small DNAPLs, and very little movement of the contaminant plume beyond the impoundment area. The off-site area is free of dissolved PCP concentration in the shallow groundwater.

- In 2003, EPA set up a monitoring program to make sure no contaminants are leaving the site boundary (defined by the railroad tracks). The flow direction for the shallow ground water to be monitored is toward north east i.e. from the site plume toward Bayou de Loutre. The monitoring plan was handled by Corps of Engineers (COE), New Orleans District. COE contracted with Materials Management Group (MMG) of New Orleans to start sampling. MMG collected samples in January 2004 had them analyzed by February 2004. Preliminary results did not conclusively show any breakthrough of the plume beyond the site boundary.

- **Accomplished**
  - Winter '97 - 98: TERC contractor to mobilize on site.
    Winter 98: Groundwater modeling using data derived from monitoring wells, boreholes and sediment sampling completed in July-Oct,1998.
  - Spring of 2000---------- contractors for USACE completed the TERC project by installing a Secondary Source area clay Cap towards the northwest of the site and removal of an UST tank from the southeastern part. A simultaneous Bioremediation study by Corps of Engineers showed that Bioremediation was not a viable option and the holding cell for the contaminated soil was not leaching for more than ten years. Thus the stabilized material in the holding cell was left in place since they could not be Bioremediated as recommended in the original ROD.
  - In September, 2001, a ROD Amendment was signed which requires monitoring, maintaining existing engineering controls & implementation of institutional control to prevent excavation or drilling at the site. A preliminary closeout report signed at the same time signified end of minor construction activities
  - The first year of monitoring sampling was conducted in January and November 2004. The results are published in "Year One Groundwater monitoring program, Popile Superfund Site". The results showed that PCP exceeding the action limit was confined to the site impoundments where waste water and sludge from wood treating operations were disposed. A well in the far Northeast exhibited high values of naphthalene. These values were seen in 1999 investigations leading to the ROD Amendment in September 2001. The origin of these high naphthalene values will be investigated in the year **two** monitoring report. These values are thought not to be related to the main plume.

Schedule

- **CERCLIS 3 Schedule Milestones**
  - Next 5Yr Remedy Assessment Sept 2006
  - Deletion will be considered after Five year Review January 2007

Benefits

- **Treatment Goal**

  - Treat soil and groundwater to prevent contamination from migrating off site. Creosote contamination clean up standard is Benzo(a)Pyrene equivalents. Benzo(a)Pyrene was chosen as the cleanup standard to measure cleanup because it is one of the most carcinogenic compounds in creosote.

  - Soil Benzo(a)Pyrene equivalents 3 ppm
    PCP 5 parts per million (ppm)

  - Groundwater Benzo(a)Pyrene equivalents 0.2 parts per billion (ppb)

Treatment Goals to be modified based on results of subsequent studies and or different use scenario (nonresidential). Results of mid 1998-2000 subsurface investigations and groundwater model study by Corps of Engineers indicate no migration of contaminants off-site, and no threat to Bayou de Loutre. Therefore EPA has concluded that *further remedial action is unnecessary*. Groundwater will be monitored by the extensive network of piezometers and monitoring wells, and necessary action will be taken if the contaminant plume expands towards the Bayou.